RESOLUTION NO. 51-2010

Whereas, the City of Reading formed a Task Force, composed of representatives from City Council, the County Commissioners and their Environmental Scientist, the City Administration, Council Staff, the Reading Board of Health and the Reading Environmental Advisory Council, to address the contamination levels leading to the closure of Bernhart's Park in the late 1990s; and

Whereas, the Bernhart's Task Force reviewed the Bernhart's Park remediation plan proposed by Exide and US EPA at a meeting held by Senator Arlen Specter, Congressman Tim Holden and Congressman Jim Gerlach in March 2010; and

Whereas, the Bernhart's Task Force reviewed the remediation plan and found deficiencies and worked in conjunction with Muhlenberg Township to prepare and submit a unified response to the proposed remediation; and

Whereas, the Muhlenberg Township Commissioners authorized the submission of the attached report at their May 17th business meeting.

Now therefore, the Council of the City of Reading hereby resolves as follows:

To authorize the submission of the attached as the joint response from the City of Reading and Muhlenberg Township on the remediation proposed by Exide and the US EPA for Bernhart's Park.

Adopted by Council on May 24, 2010

President of Council

Attest:

City Clerk

I, LINDA A. KELLEHER, City Clerk of the City of Reading, Pa., do hereby certify, that the foregoing is a true and correct copy of the original Resolution passed by the Council of the City of Reading, on the 24 day of May A. D. 2010 Witness my hand and seal of the said City this 27 day of May A. D. 2010

CITY CLERK

CITY OF READING, PENNSYLVANIA

815 WASHINGTON STREET
ROOM 2-24
READING, PA 19601-3690
(610) 655-6204

Monday, May 24, 2010

Khai M. Dao, Project Manager
U.S. EPA - Region 3
1650 Arch Street (3LC30)
Philadelphia, PA 19103-2029

Dear Mr. Dao:

Representatives of the City of Reading and Muhlenberg Township have thoroughly reviewed the plans dated December 2, 2009, March 31, 2010, and April 1, 2010 for remediation of Bernhart's Dam/Park, as well as the EPA materials "Exide Soil Investigation and Cleanup Summary" and "Bernhart Park Investigation Summary" presented at our recent meeting in the office of Senator Specter and via subsequent emails.

We are not interested in placing blame. We wish to take a realistic approach to solving this problem but reserve our right to seek additional relief if the remedy fails. We understand that Exide purchased the site on which a former battery smelter existed since 1935 to continue its future battery smelting operations. We believe that our mutual goal is to be sure that Bernhart's Dam/Park area is restored, opened, **and** maintained in perpetuity as a park for the public, free of hazardous substances above levels that pose a threat to human health and the environment. We further desire that Exide's remedial plan, subject to our requested modifications, be implemented as expeditiously as possible. Prior to its closure in 1996 by the City because of lead contamination produced by stack emissions, it was a frequently used park and generated fond memories in the minds of many Berks County residents and visitors. Since that time there is demonstrable physical evidence that the park is still being used despite its official status as "closed" due to the unsafe conditions produced by lead deposition in the soil. As a closed facility, the City does not encourage public use due to the exposure risk, and therefore performs minimal maintenance. The evidence of continued use is based on site visits and physical evidence left at the site.

Conceptually we agree with Exide's proposal but we must insist that the following additional concerns be addressed and met before we are prepared to sign off on the project. By conditionally approving the Work Plan, the City does not waive and in fact reserves its right to present claims in the future for loss of use, stigma, diminution of fair

market value, natural resource damage claims, and indemnification for bodily injury claims arising from the presence of hazardous substances in soil, surface water and ground water at the site.

Concerns to be met are as follows:

Health Concerns

- Within line of site distance of the facility is a residential area with many children. We continue to question the validity of setting the level of 650 ppm for cleanup instead of the 400 ppm US EPA standard for lead in children's play areas (or the 300 ppm Canadian peer reviewed guideline for parks referenced in Exide's Ecological Risk Assessment). We continue to assert that a maximum soil lead concentration of 400 ppm is essential to ensure long term protection of the children, residents, city workers during routine intrusive work at the park, and the environment for those who visit the park (many of whom would be spreading blankets on the ground for picnics). The site specific standard of 650 ppm is not protective of human health, our site visits leave us with no doubts that children play in impacted areas with greater frequency and duration than are reflected in Exide's modeling. Attached are this year's lead level reports for 3 Headstart Centers in Muhlenberg/Laureldale area and for the Antietam Center (Attachment 5). You will notice that higher levels are present in the Muhlenberg/Laureldale center children than in the Antietam Center (where there are many <5 levels). Household lead paint levels do not account for this difference since the age and type of residences of these children in these areas is similar, hence lead paint exposures would be similar.

- Exide must offer blood lead level screening at their expense to all residents (regardless of age) of the Saylor's Farm Estate, and nearby Muhlenberg Township and Laureldale Borough on an as needed basis and annually during the months of June through August. Lead levels are highest in blood during the summer months. This offer should be distributed to all public and private schools and child care centers in the Muhlenberg School District area. All results of such testing must be submitted to the PA Department of Health Lead Monitoring program and to the City of Reading Environmental Advisory Council through the City Clerk Office for evaluation annually no later than September 30 of each year beginning in 2010. At this time we will consider blood lead levels $\geq$ 5 micrograms/deciliter to be excessive (a level of $\geq$ 5 micrograms/deciliter is the proposed new standard for excessive blood lead that is evidence-based. Levels of $\geq$5 micrograms/deciliter have been proven to have a causal relationship with learning disabilities). Results must show no rise in average lead levels/age of subject tested compared to the previous year results. Any rise over data submitted in September 2010 must trigger a study to determine if the remediation has failed in any material respect.

Environmental and Technical Concerns:

- From an environmental justice viewpoint we are troubled about the effect of the remedial plan on the residents in the area including children from minority and low-income families[1]. Children of local residents continue to play unsupervised in all parts of the park despite the presence of signage to keep trespassers out. Exide's model is flawed on the issue of how frequently trespassers, especially young children walk through and play in areas of the Park not outlined within the current work plan for remediation.

- EPA/Exide blood lead risk model should be rerun using actual lead-in-air data collected both inside and outside the Exide property boundaries
    - At the five current Exide ambient lead monitors (samplers) to allow a more accurate evaluation of the real conditions and ongoing risks associated with the Exide plant.
    - By locating new monitors at heights above the tree canopy at the
        - Reading-Muhlenberg Career and Technology Center;
        - Saylor Farms Estate;
        - Area OO or NN in the park;
        - Area T or Y in the park; and
        - Area MM in the park

[1] Based upon the US EPA Enforcement and Compliance History Online (ECHO) database for the area surrounding the Exide facility, there is an ~50% non-white population with 33% of the community at less than a $15,000 income and 30% minors under the age of 17 within one mile of the Exide facility.

- We are very concerned that Exide plant lead stack emissions increased five-fold between 2001 and 2005 (see Table 1-a compilation of emissions data forwarded to Dr. Eve Kimball by Mr. Matthew Love of Exide). The 2005-2009 quarterly samplings from the St. Mikes I, St Mikes II, St Mikes III, Hotel and Yuasa II ambient air monitors currently operated by Exide to monitor ambient air lead levels per the National Ambient Air Quality Standard (NAAQS) have been consistently **ABOVE THE 2008 STANDARD** of 0.15 micrograms/meter^3 on a 3-month rolling average basis] except for St Mikes I station in the 4th quarter of 2008 which measured 0.14 micrograms/meter^3. We refer you to the March 31, 2010 attached report from Wheeler Environmental Services for additional details and concerns (Attachment 3).

- Due to the current impairment of soil quality and to verify that continued deposition to soil in the park is not occurring, we insist that Exide establish and maintain the sampling grid established in its reports from 2001 and perform yearly sampling at all sites on the grid with levels $\geq$ 400 mg/kg on the 2001 report to verify that continued site contamination is not occurring. Results of this sampling must be submitted to the City of Reading or to whatever entity has ownership of and management responsibility for the park no later than August 31 of every year **beginning in 2010.**

This sampling process must continue until all stack emissions and quarterly ambient air quality emissions sampling data are in compliance with all applicable laws and regulations, and there is no increase in lead levels in soil samples for a period of 5 years.

- The soil sampling requested above must be **done per protocol** outlined in the Environmental Impact report submitted by the Berks County Commissioners prepared by Wheeler Environmental Services.

- Areas OO, NN, PP, TT, UU, ZZ, and KK and the islands must be added to the remediation proposal with extension of the loop trail through OO, NN, and PP along the edge of the lake to the bridge at the edge of the dam area.

- We recently discovered evidence that children and adolescents are riding motorcycles on trails in the portion of the Saylor Estate adjacent to MM, NN, and OO where lead and therefore arsenic levels are highest. Therefore we recommend that in addition to the hill trail, the trail which runs around the lake and connects to the bridge at the dam breast be remediated and restored to enable walkers to walk around the lake.

Park Remediation Work Plan Concerns:

- **All** areas with >400 mg/kg of lead on the August 31, 2010 sample must be remediated.

- Because Exide's remedial plan will leave some areas unremediated, children of local residents, some of whom may have language barriers, will still in all likelihood wander unsupervised into areas of the Park with dangerous levels of lead contamination remaining in soils. Exide's proposed warning signs will not keep children under age 7 out of the unremediated areas. Bilingual, graphic signs must be placed at trail inception, loop, and at the bridge clearly indicating potential health hazards of going off the trail and precautions necessary to avoid those risks. Sign locations and verbiage must be subject to City approval.

- Exide's Work Plan must devise other ways to minimize the risk to children wandering unsupervised into highly contaminated areas of the Park.

- Exide must rehabilitate those areas of the park that have fallen into disrepair since the park was closed in 1996, including refurbishing and if warranted replacing structures and plantings that pose a public safety hazard. Trees and branches must be pruned and removed as necessary for public safety, park function and appearance.

- Exide must pave the parking lot (Areas A, B, C, D, E) along Crystal Rock Road up to the proposed trail entrance to prevent the generation of lead containing dust by vehicles and pedestrians.

- Consideration should be given to use of hydroxyapatite and phosphate rocks for trails and any other appropriate places to mitigate the ongoing lead deposition from stack emissions[12].

- The proposed remediation of section M should ensure that the water fountain in the park is functioning properly, and is clear of lead contaminants, and able to be maintained in the future.

- Paths should be constructed to a width of eight feet wide instead of four feet wide to enable wheelchair, emergency vehicle, and maintenance vehicle accessibility. An area 2 feet wide on either side of the trail should be remediated but all plants with trunks $\geq$ 1-inch diameter should remain.

- Park boundaries and areas where soil lead levels remain above 400 ppm should be planted with appropriate natural barriers to prevent entry rather than utilizing fences.

- Determination for use of sod or seed for remediation in grassy areas should be based on project completion timing and subject to City approval. (Sod is preferable if not planted by the end of the growing season - mid-to late October).

- Exide, its successors and assigns, must
    - Maintain the trails in perpetuity;
    - Commit to periodically survey the Park to make sure that its remedy has not failed in any respect;
    - Take corrective action in the event of any such remedy failure;
    - Establish an appropriate escrow for these purposes, with the amount subject to approval by the City of Reading; and,
    - Fund promotion of the opening of the park when that time comes.

<u>Miscellaneous concerns:</u>

- Evidence that Exide has obtained all requisite permits and certificates of insurance naming the City of Reading and Muhlenberg Township as additional insureds. Policies shall include pollution and environmental impairment coverage. Insurance certificates of subcontractors must include the City of Reading and Muhlenberg Township as additional insureds. All liability limits and scope of coverage must be a minimum of $2,000,000 and approved by the City of Reading prior to commencement of work. All permit applications must be copied to the City of Reading and Muhlenberg Township at the time of submission.

- Because the boundaries of the area seem to be in question according to Muhlenberg Township sources, EPA must require Exide to determine and mark the actual boundaries of the park area by field survey. Paper and electronic copies of this survey shall be forwarded to the City of Reading and Muhlenberg Township Engineer's Offices.

- Both construction and post-construction erosion and sedimentation (E&S) control measures implemented must be effective and monitored to ensure effectiveness and compliance with applicable law.

In summary, we request that

- Park remediation begin as proposed **immediately,** including **ALL of the concerns and suggestions specified under "Additional Concerns to be Met"** so that the park can be ready for a 2010 opening, if at all possible.

- Environmental justice concerns specified are addressed.

- We reserve the right to submit supplemental comments beyond the June 1, 2010 deadline based upon 2010 re-sampling data of the park and blood lead screening results. We understand that once the cleanup is complete, the City can apply for Pennsylvania's Act 2 releif of environmental liability, if we choose.

We hope that a harmonious relationship between the parties involved can become a model for similar lead-acid battery recycling operations across Berks County and the USA.

Sincerely,

Thomas McMahon	Vaughn Spencer	James Murray for
Mayor	President, City Council	Township of Muhlenberg
City of Reading	City of Reading	Board of Commissioners

Enclosures:
Attachment 1 - References
Attachment 2 - Table 1 - Lead emissions - Exide 2001-2009
Attachment 3 - Wheeler Environmental Services Report - March 31, 2010
Attachment 4 - Wheeler Environmental Services Report for Berks County Commissioners - May 10, 2010
Attachment 5 - 2010 Headstart lead testing results from Muhlenberg and Antietam centers
Attachment 6 - Table 2 - Blood lead levels - Saylor Farm Estates sampling - children to age 12 - Pinnacle Lead Program, May 8, 2010
Attachment 7 - Letter of Support

cc:
The Honorable Arlen Specter
The Honorable Tim Holden
The Honorable James Gerlach
Matt Love, Exide
Berks County Commissioners

Attachment 1 - References:

1. Mushak, Paul - "Lead remediation and changes in human lead exposure: some physiological and biokinetic dimensions": The Science of the Total Environment 303 (2003) 35-50.
2. "Lead Remediation Task Force Kit" - Product Bulletin - JNJ Industries - 290 Beaver Street, Franklin, MA 02038 - 2006
3. Soil and Sediment Remediation at former Lordship Point Skeet Shooting Range - ART Engineering, LLC
4. Process for the remediation of lead-contaminated soil and waste battery casings - United States Patent 5766303 - Lead-contaminated soil and battery casings are remediated using a plasma arc furnace which pyrolyzes the soil and waste battery casings so as to form a vitrified slag and a combustible gas, respectively. The combustible gas along with volatilized lead (and other heavy metals which may be present) are transferred to, and used as a primary fuel by, a conventional smelting furnace. The volatilized lead that is entrained in the combustible gas is thus transferred to the recovery and environmental protection/control equipment associated with the smelting furnace or other conversion system. The soil, on the other hand, is converted into a non-toxic (i.e., according to the Toxicity Characteristic Leaching Procedure) vitrified slag by the plasma arc, which may be crushed and used as a commercial material (e.g., roadway aggregate, asphalt filler material and the like) or simply transferred to a landfill where it poses no environmental threat.
5. Donlon, DL, et al - "A general Essay on Bioremediation of Contaminated Soil" - Montana State University-Bozeman, Dept of Land Resources and Environmental Sciences Water Quality and Irrigation Management - 2006
6. Stegmann, R, et al - Treatment of Contaminated Soil - Fundamentals, analysis, applications, 2001
7. Alloway, B.J. - Heavy Metals in Soils, 1995
8. Dzantor, E.Kudjo - Maryland Cooperative Extension Fact Sheet #757 - "Bioremediation of Contaminated Soils: What it is and How to do it"
9. Peters, RW and Shem, L - "Remediation of lead-contaminated soils" - Conference: International symposium on energy, environment, and information management, Argonne, IL 18 September 1992
10. Cunningham, Scott and Berti, William - "Remediation of contaminated soils with green plants: An overview" in InVitro Cellular and Developmental Biology - Plant: 1054-5476 (Print) 1475-2689 (Online), Oct 1993
11. Khan, AG, et al - "Role of plants, mycorrhizae and phytochelators in heavy metal contaminated land remediation" Chemosphere 41:1-2, July 2000: 197-207
12. James A Ryan and Pengchu Zhang, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268 [513-569-7653]

Attachment 2 - EXIDE EMISSIONS DATA 2000-2009

Pollutant	###	###	###	###	###	2005	2006	2007	2008	2009
Lead (tons/year)	0.42	0.40	0.35	0.35	0.94	2.2305	2.2203	1.4740	1.4410	1.2510
SOx (tons/year)	82.10	71.59	51.28	87.55	80.93	74.0500	81.0800	93.0600	#####	83.2800
NOx (tons/year)	55.61	55.72	56.49	54.52	57.09	61.3900	61.1600	60.7600	61.1300	59.4100
VOC (tons/year)	1.09	0.93	0.97	0.94	1.11	1.3700	1.4600	1.4700	1.4600	1.3300
CO (tons/year)	6.52	5.63	5.87	5.68	6.69	8.3200	8.8400	21.5400	21.7300	20.3400
Polycyclic Organic Matter 10 (tons/year)	42.82	44.09	44.09	43.16	43.29	45.1980	45.3330	45.0520	45.4560	50.8970
PM 2.5 (tons/year)	[redacted]					0.0000	0.0000	0.0000	0.0000	0.0000
Polychloro-biphenols (tons/year)						<0.01	<0.01	<0.01	<0.01	<0.01
Dioxins (lbs/year)						<0.02	<0.02	<0.02	<0.02	<0.02
Furans (lbs/year)						<0.02	<0.02	<0.02	<0.02	<0.02

Attachment 2 - EXIDE EMISSIONS DATA 2000-2009

	[redacted]					
Mercury (tons/year)		<0.0106	<0.0106	<0.0106	<0.0106	<0.0106
Ammonia		0.0000	0.0000	0.0000	0.0000	0.0000

Wheeler Environmental Services

PO BOX 501 – Boyertown, PA 19512-0501 Phone: 610-369-2905
wheeleres@dejazzd.com Fax: 610-369-2906

March 31, 2010

Senator Arlen Specter
Federal Building, Suite 3814
504 West Hamilton Street
Allentown, PA 18101-1613

RE: Bernhart Park Clean-up Concerns

Senator Arlen Specter:

Wheeler Environmental Services on behalf of Berks County and The City of Reading submits the following concerns with respect to the proposed clean-up of the Bernhart Park, Reading, PA. We hope that these comments and concerns will be carefully reviewed. We further hope that due consideration for further evaluation of the clean-up standard and the extent of the clean-up will be undertaken.

Lead-in-Air Data related to Actual Community Exposure Levels:

It is bothersome that PA DOH, ATSDR, and US EPA have not re-run their blood lead risk model using actual lead-in-air data collected at Exide ambient lead monitors (samplers), one of which is located adjacent to Bernhart Park (Yuasa II). Use of this data would allow a more accurate evaluation of the real conditions and risks associated rather than utilizing a default numerical value to enter into the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children (model).

Table 1 IEUBK Soil/Dust Ingestion Defaults by Age

Age Group (years)	IEUBK Model Defaults (g/day)
0-1	0.085
1-2	0.135
2-3	0.135
3-4	0.135
4-5	0.100
5-6	0.090
6-7	0.085

Source: US EPA 1994

Berks County has attempted to have PA DOH and PA DEP discuss the issue of the siting of the Exide lead samplers to ensure they measure lead levels that the community and children are exposed to (e.g., locating a lead sampler at the nearby vocational technical school). PA DOH's position is that the Exide lead samplers do not measure community lead exposure but rather lead exposure at the Exide property boundary. It seems obvious that the community exposure is what lies just beyond the property boundary. Therefore, the data collected at the property boundary, is a more accurate measure of real conditions than an arbitrary default number chosen for the model.

PA DEP relocated lead samplers in January 2010 near the cemetery adjacent to Exide, which we do not believe is any more representative of actual conditions. In fact, the old sampling locations were, in our opinion, better placed to measure community exposure. There is no other protocol in place to assess the community risk from the Exide air emissions other than the ambient lead monitors being used at the property boundary.

We feel the Health Consultation risk assessment failed to address relevant lead-in-air data that is collected by PA DEP and Exide in the vicinity of the park. (The "Yuasa II" sampler is adjacent to the park.) The data shows significantly higher lead-in-air concentrations than the default level used in the IEUBK model. In our opinion, the results of the model do not reflect an accurate portrayal of real conditions.

Exide's Real Data:

Table 2 below summarizes the Exide quarterly monitoring data. These data were extracted from records reviewed during a PA DEP file review. Exide operates five (5) ambient lead monitors – three (3) are on the hill at the St. Michaels seminary (St .Mikes I, II, and III), one (1) is along Spring Valley Road which is elevated about 10 feet (designated as *Hotel*), and one (1) is to the east of Yuasa toward the new residential development and near Bernhart Park (Yuasa II).

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TABLE 2

Exide's quarterly average lead concentrations (micrograms per cubic meter-$\mu g/m^3$) at these referenced sites over the past 3 years have been as follows:

Time Period	St. Mikes I	St. Mikes II	St. Mikes III	Hotel	Yuasa II
2nd Qtr 2006	0.75	0.72	1.25	0.39	0.44
3rd Qtr 2006	0.69	0.68	0.77	0.30	0.42
4th Qtr 2006	0.90	0.85	1.17	0.47	0.74
1st Qtr 2007	0.35	0.38	0.38	0.31	0.95
2nd Qtr 2007	0.67	0.62	0.70	0.43	0.47
3rd Qtr 2007	0.79	0.64	0.97	0.37	0.32
4th Qtr 2007	0.38	0.54	0.62	0.24	0.43
1st Qtr 2008	0.49	0.37	0.49	0.38	0.68
2nd Qtr 2008	0.67	0.68	0.94	0.21	0.35
3rd Qtr 2008	0.39	0.29	0.53	0.20	0.31
4th Qtr 2008	0.14	0.17	0.18	0.26	0.31
1st Qtr 2009	0.31	0.33	0.43	0.31	0.49

The National Ambient Air Quality Standard (NAAQS) for lead is 0.15 $\mu g/m^3$ on a 3-month rolling average basis. As noted on Table 2, the lead levels in ambient air are consistently well above the lead standard at all the monitors. In fact, there was only one (1) monitor for one (1) quarter in which the lead was just under the lead standard. Ambient lead levels are being measured at 2-3 times the lead standard on a consistent basis and in some cases ten (10) times the standard. Based upon the real data observed at the Exide facility, the numeric values utilized in the IEUBK would grossly underestimate the exposure and continued deposition of lead in areas adjacent to the Exide facility.

Lead-in-air data has been collected for many years in the vicinity of the Exide plant and in the vicinity of the Bernhart Park through multiple Hi-Vol samplers operated by the PADEP and Exide. These samplers operate on a 1-in-6 day schedule and measure lead-in-air concentrations in $\mu g/m^3$ on a 24-hour average basis. This data has shown 3-month average lead concentrations significantly higher than the lead NAAQS of 0.15 $\mu g/m^3$, which the EPA has identified as the level that is protective of human health, especially for neurological impacts in children.

The IEUBK child and adult blood lead models should be rerun using actual local lead-in-air concentration data instead of the much lower 0.1 $\mu g/m^3$ default level

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used in the Health Consultation study. For example, ambient lead-in-air levels have been detected as high as 1.25 $\mu g/m^3$ at the Exide facility.

Recontamination of Soils From Ongoing Exide Smelter Operations:

We request that the air dispersion model (AERMOD) being used to evaluate lead-in-air concentrations in the area be run using the deposition component and that the agencies re-evaluate the clean-up levels for lead at the park. Based upon the air emissions data reported by Exide, deposited lead to surrounding soil may be as high as 2-4 tons per year (tpy) based upon reported lead air emissions. We request PA DEP and US EPA evaluate lead deposition (both dry and wet) and impact on surface soil lead levels as part of ongoing air dispersion modeling estimates of ambient lead-in-air concentrations associated with the nearby lead smelter and battery plant under the 2008 Lead NAAQS.

We anticipate similar results to those of a site in Missouri. The post remedial tests in soils reveal a site "remediated" to a level of 400 parts per million (ppm), less than the 650 ppm level proposed for the park, was re-contaminated by lead air emissions from a nearby smelter. We expect the same result at Bernhart Park based upon the continued emission of lead.

Tests Show Recontamination of Soils in Herculaneum, Mo., from Doe Run Resources Corporation Lead Smelting Operation
Release date: 10/26/2009

Contact Information: Chris Whitley, 913-551-7394, whitley.christopher@epa.gov

Environmental News

FOR IMMEDIATE RELEASE

(Kansas City, Kan., October 26, 2009) - EPA Region 7 is considering a range of enforcement actions against the Doe Run Resources Corporation, now that recent tests have shown more than one-third of a group of properties situated within a mile of the company's lead smelter in Herculaneum, Mo., contain lead at levels exceeding 400 parts per million (ppm), EPA's threshold for removing and replacing such soils.

Of 372 properties sampled, 129 had at least one area exceeding the 400 ppm action level for lead. A total of 104 of those 129

"action level" properties have already undergone soil remediation within the past nine years, under work previously ordered by EPA.

"While Doe Run has taken some steps in recent years to reduce lead emissions, those efforts clearly fall short of what was necessary," said William Rice, acting regional administrator. "The recontamination we are seeing in Herculaneum is unacceptable. EPA intends to work with the Missouri Department of Natural Resources (MDNR) to correct this problem by requiring Doe Run to implement a comprehensive, permanent solution to address this persistent problem."

Doe Run's facility at 881 Main Street in Herculaneum has been in operation for more than a century and is the largest smelter of its kind in the United States. EPA's enforcement-related involvement with the facility began three decades ago, over concerns with air emissions, children's elevated blood lead levels, elevated lead levels in residential yard soils, and home interior dust in Herculaneum.

Both EPA and MDNR have taken a number of enforcement actions against Doe Run over the years, including EPA's July 2009 unilateral administrative order, directing the company to sample and test gravel driveways and surface yard soils from all homes within one mile of the smelter.

Those tests, completed by a contractor hired by Doe Run, were completed last month, after which the company sent confidential letters to property owners and residents, informing them only of the test results from their respective properties. EPA received a full report of the sampling activity on October 8, 2009. A redacted copy of that report is available at www.epa.gov/region07/news_events/legal/.

"Together with our state partners, EPA intends to apply science and the law so that the residents of Herculaneum, particularly young children, do not remain vulnerable to the known health risks associated with toxic lead exposures," Rice said.

New NAAQS Lead Standard

Berks County is also disappointed that the PA DOH continues to maintain that the "old" Center for Disease Control (CDC) child blood lead intervention level of 10 ug/dL is suitable. It should be noted the US has a new lead-in-air National Ambient Air Quality Standard (NAAQS) standard based on a much lower blood lead level (BLL) for children. The numerical value used in the NAAQS risk assessment is approximately 4 ug/dL.

National Ambient Air Quality Standards for Lead

Pollutant	Primary Stds.	Averaging Times	Secondary Stds.
Lead	0.15 $\mu g/m^3$ (1)	Rolling 3-Month Average	Same as Primary
	1.5 $\mu g/m^3$	Quarterly Average	Same as Primary

(1) Final rule signed October 15, 2008

Source: http://www.epa.gov/air/lead/standards.html
http://www.epa.gov/air/criteria.html

The PA DOH and ATSDR concluded in the "Health Consultation" that the US EPA proposed soil lead cleanup levels in the park are "...protective of human health, especially children...". We disagree with this conclusion and believe that it is inconsistent with the recent comprehensive human health risk assessment for lead prepared by the US EPA in support of their October 2008 lead-in-air NAAQS.

The conclusion in the Health Consultation study is based on the assumption that a blood lead level of 10 ug/dL is protective of human health, and this level is then plugged into the IEUBK model even though it is based upon an outdated "CDC intervention guideline".

The comprehensive USEPA human health multi-pathway lead risk assessment performed in support of the new lead NAAQS focused on children's neurological impacts and IQ loss and concluded that child blood lead levels in the 4-8 ug/dL range represented unacceptable human health risks (see: Final Rule for lead NAAQS in Fed Reg dated 11/12/08, pg 66975 et seq.).

Based upon the referenced risk assessment studies for the NAAQS rule, a new human health risk assessment (IEUBK child blood lead model) should be conducted to determine whether the lead risk assessment performed for the Bernhart Park and for surrounding residential properties is indeed protective of human health, especially for children based upon the new NAAQS standard.

As indicated in the *Guidance Manual for the IEUBK Model*, the development of the default values relied upon analysis performed during the review of the NAAQS for lead. It should be expected that since this standard has been re-established that the "new" standard should be attained at the park. (Source: US EPA #540-F-00-007 OSWER #9285.7-33 December 1999)

Steep Sloped Areas:

The steep, wooded areas within the park with high soil lead concentrations should be given further consideration. The IEUBK child blood lead model should be rerun assuming that children will visit these areas with a frequency of at least 20 days/year, identical to the assumption made for adults. In fact, based upon the proximity of the new housing development the actual frequency may exceed 20 days/year for children.

There is no reasonable expectation that young children living immediately adjacent to these areas will not visit these areas. It would seem likely that adventurous youth would consider this area challenging and "fun" even if fences and/or signage were present.

Public parks are owned by all the citizens of a community. They should all be entitled to the full use of the park's resources. Why has it been assumed that the property owned by the community should not have full restitution? The community brought no cause for its abandonment and should be entitled to full use of its resource. Perhaps Exide should consider purchasing another site for the community to use without restriction.

Other Metals of Concern:

The risk assessment only addresses the concern for lead in soils in the park. While we understand the consent documents for Exide currently only address lead contamination the concern for other metals associated with the Exide facility including arsenic, cadmium, chromium, manganese, and selenium should also be considered a health risk at the park. All of these metals could pose significant health risks to those who may frequent the park and it is concerning that these metals have not been assessed to date.

The PADOH and ATSDR should review available soil metals data and metals-in-air data for nearby properties and conduct a comprehensive human health risk assessment to determine whether other metals in soil may need to be mitigated to protect human health.

It would be a tragedy to allow the clean-up to proceed and people to have a false sense of security that they are safe when they may be exposed to other metals of

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concern or perhaps at greater risk. Cancer risks should be estimated for exposure to other metals observed in the park soils as well as in ambient air in the vicinity of the park so that the lead cancer risks can be compared with cancer risks from other toxic metals in the environment related to Exide's operations.

Fear Factor:

There has been a stigma with the use of this park. It is up to Exide to remove the fear associated with the use of the park. The community must be reassured as a whole that there is NO risk of environmental exposure or risk that unduly leaves the citizens of the City of Reading apprehensive with the use of this resource. The agencies involved at this time must set the bar high enough to alleviate the fear and remove the potential for any future concerns at the park with respect to metals contamination. The agencies should also be willing to assume the liability associated with setting a standard below a state, federal, or other standard for clean-up that could place anyone at risk.

Environmental Justice:

The theory of environmental justice allows for the fair treatment of all individuals with respect to the development, implementation, and enforcement of environmental laws. The basic premise is for everyone to have the same protection from environmental and health hazards with equal input into the decision making process. Based upon the US EPA Enforcement and Compliance History Online (ECHO) database the census/demographic data for the area surrounding the Exide facility shows that there is about a 50% non-white population, with 33% of the community less than a $15,000 income with 30% minors under the age of 17 within one (1) mile of the Exide facility.

Source: http://www.epa-echo.gov/cgi-bin/get1cReport.cgi?tool=echo&IDNumber=4201100032
http://oaspub.epa.gov/envjust/env_just.get_geom?report_type=).

Based upon these preliminary findings the US EPA may need to evaluate whether environmental justice issues exist with respect to the adjacent community bearing a disproportionate share of the negative environmental consequences resulting from Exide and whether additional consideration of the findings and decisions is warranted.

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If you should have any questions related to this matter, please feel free to contact us.

Sincerely,
Wheeler Environmental Services
on behalf of Berks County

Stephen A. Wheeler
President

Bernhart Park 03-31-10 Ltr Berks County

cc: Berks County Commissioners
City of Reading
US EPA
PA DEP
PA DOH

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May 20, 2010

Khai M. Dao, Project Manager
U.S. EPA - Region 3
1650 Arch Street (3LC30)
Philadelphia, PA 19103-2029

RE: Comments Regarding the Draft Bernhart Park Remediation Work Plan

Mr. Dao:

The Berks County Commissioners, in consultation with Wheeler Environmental Services have reviewed the Draft Bernhart Park Remediation Work Plan dated March 30, 2010, prepared by Advanced GeoServices, West Chester, PA for Exide Technologies. We have concluded that the Plan as submitted entails serious deficiencies, and in support of our conclusion, we offer the following specific comments and recommendations:

As a result of over 75 years of lead battery manufacturing and lead smelter operations, including periods prior to air pollution controls and the implementation of the Clean Air Act of 1970 and the Lead NAAQS air standard of 1978, the Exide facility contributed to lead contamination that has adversely impacted the surrounding communities. According to the USEPA Fact Sheet, the source of lead contamination off-site is believed to be from general plant operations prior to the introduction of air pollution control requirements in the late 60s. However, the ongoing failure of Exide to meet compliance with multiple fugitive dust, stack emission, and odor standards indicates that the potential for continued impacts exists.

In addition, ongoing ambient air sampling conducted by the PADEP in the vicinity of the park has demonstrated that lead-in-air concentrations remain significantly above the 2008 Lead NAAQS. The County does not agree that this is solely a legacy issue and feels that Exide Technologies owns responsibility for both the current clean-up and for the potential for re-contamination at the Bernhart Park (park).

The USEPA Region 7 Doe Run Resources Corporation Lead Smelting Operation Site (Doe Run Site) should be an example to the USEPA Region 3 and the PADEP of the potential for the park, residential properties, and other parcels for being re-contaminated by lead smelting operations such as the Exide facility. Over one-third of the areas remediated at the Doe Run Site had become re-contaminated with lead, cadmium, and arsenic within nine (9) years of remediation We hope the agency representatives responsible for the work to be performed at the Bernhart Park will agree with William Rice, USEPA Region 7 Regional Administrator when he stated: "Together with our state partners, EPA intends to apply science and the law so that the residents of Herculaneum, particularly young children, do not remain vulnerable to the known health risks associated with toxic lead exposures." We hope for the same degree of concern and dedication to the law and the protection of children for the work to be performed at the park.

While the work plan indicates that soil sampling for lead was conducted between 1994 and 2009, it should be noted that only select areas of the park have been recently sampled and that the deposition of lead has continued since the 2001 Exposure Area (EA) soil screening conducted by Advanced GeoServices. In addition, review of the various reports submitted by Risk Based Remedies Consulting, Inc. (RBR), Advanced GeoServices, and others for lead in soil sampling at the park, indicates there has been a high variability with respect to the sample results. The high variability suggests that the deposition of lead is not uniform within the 20,000 square foot EAs and that smaller study area grids should have been selected for re-sampling and site evaluation. We therefore suggest that as part of the remedial plan for the park an up-to date sampling with smaller sample grids be used to evaluate the site to ensure that the levels of lead in soil are below the clean-up levels established. We especially feel this important in the

open grassy areas of the park where Exide currently has no consideration for cleanup activities under the draft work plan. XRF meter readings monitored by the agency(s) and the City of Reading could be used to verify compliance with the 650 mg/kg or parts per million (ppm) clean-up level established at minimal cost to Exide. This would also provide a level of comfort to citizens of Berks County and City of Reading with concerns regarding exposure to lead especially for children.

The County disagrees completely with the findings of the Risk Assessment that concluded that there was no potential unacceptable risk to individuals who may use the park, even with no remediation undertaken. Some areas of the park have elevated levels of lead in soil that would pose serious health threats to individuals even at minimal exposure timeframes. In our opinion, Exide's commitment to clean up the park in select mowed lawn areas to levels of 650 mg/kg (ppm) which is well above the statewide health standard of 450 mg/kg (ppm) and place a small gravel trail (680 feet long X 4 feet wide) in more seriously contaminated areas is a small gesture that requires minimal expense. Unfortunately Exide does not have a sense of responsibility for allowing unimpeded access to all areas for public use of the park even at the elevated clean-up levels. In our opinion, Exide again is only considering the minimum of what the agency(s) requires as it does with its air emissions, odor issues, and all other compliance issues it faces.

Many of the assumptions in the ATSDR and PADOH report appear to be based on a non-use or limited use scenario of a public park, where we feel full access should be considered. Any option except cleaning up the entire site to the clean-up level of 650 ppm suggests this is no longer a public park but a restricted access zone. It should also be noted that these agencies did mention "remedial...activities" as well as the other options. We found no discussion for an optional plan for remediation. We are concerned with the precedent this work plan sets for Exide's responsibility to cleanup other known contaminated sites within the County. For example, the work plan offers no requirement for clean up in steep slope areas.

THE FOLLOWING SPECIFIC COMMENTS ARE PROVIDED IN THE ORDER THEY WERE PRESENTED IN THE WORK PLAN.

Section 2.0 Proposed Remedial Activities

Section 2.3 Dam Crest

The County would like to review the actual comments provided by the PADEP Dam Safety and Division with respect to limitation of soil removal to a depth of 3 inches on the dam mentioned by Exide in the work plan. Telephone communication with Mr. Richard Reisinger, Section Chief, Dam Safety Division - Delaware Watershed, May 11, 2010 @ 1:30 PM indicated the exact opposite of what was mentioned in the work plan. According to Mr. Reisinger the recommendation of the Dam Safety Division for the Bernhart Park Dam was to remediate all contaminated areas of the dam. This is due to the fact that those who frequent recreational areas with dams or impoundments are curious about them and often walk through and explore these areas. In addition, apprehension about the continued maintenance of the dam by City of Reading employees could be raised due to the existing levels of lead-in-soil that would remain if the remediation did not take place. It is the opinion of Dam Safety Division to remediate all areas possible on the dam. We suggest that the extent of the remediation be expanded on the dam to appropriately address the concerns raised by the Dam Safety Division and prevent the potential for exposure to lead from visitors and City of Reading workers at the park.

All work performed on the dam is subject to Dam Safety Division approval and inspection upon the completion of the work. The engineer or engineering firm certifying the work is responsible for the work, not the contractor or the City of Reading. Although the City of Reading is the owner of the dam we feel Exide should be responsible for a third party inspection of its work and not the City of Reading Engineer as mentioned in the work plan and on site drawings. The work being conducted at the park is the result of Exide or its predecessors contaminating the site and no burden for this work effort should be placed on any other party.

Written certification should be provided to the City of Reading that the work on the dam meets all state requirements and an approved inspection by the PADEP Dam Safety Division is documented upon completion of Exide's remedial work.

Section 3.0 Construction Procedures

Section 3.0 states; "Detailed specifications have been developed for the proposed remediation and are provided as an attachment to this Work Plan" We have found no such "*detailed specifications*" in the work plan. We did find vague cookie cutter specifications lacking the necessary detail to perform the actual work.

Section 3.1 Premobilization

Prior to mobilization at the site baseline ambient lead-in-air samples should be collected for comparing construction activity lead-in-air sample results. The sampling devices should be placed in various upwind and downwind positions at the park to collect reference data for future comparison of lead-in-air samples. High-volume (Hi-Vol) samplers should be located in cooperation and agreement with agency, City of Reading Officials, and Exide contractors. These samplers should run daily (midnight to midnight) during the remedial construction activities. This would match the current PADEP monitored Hi-Vol samplers operating adjacent to the Exide facility.

The data obtained from these samplers does not provide real time results. Lead or other metals are deposited on a quartz filter which is submitted to an analytical laboratory for analysis. Results can be obtained within a 24-hour turn around time (TAT). High–volume samplers should be used to assess the effectiveness of dust control measures for the project. The results of the monitoring should be used to modify the dust control measures and notify area residents, if exceedances are observed.

A weather station should be installed prior to the commencement of remedial activities at the park to be used to verify wind speed and direction, relative humidity and temperature. The weather station should be able to record data on a continual basis and should be coordinated with the midnight to midnight collection periods for the Hi-Vol samplers.

Pre-construction photographs should be taken and cataloged to verify pre-construction details and existing site features within the site construction zones.

Section 3.2 Work Zone Preparation

The work plans states: "The precise sequence of work will be determined by the selected Contractor..." We see this as a major flaw in the work plan. The engineer is passing the construction details off to the contractor who is there to perform the work, not design the remedy. It is somewhat like the *fox watching the hen house* when you allow the contractor to select what and how he is going to do for the job. The work plan lacks the detail of how the work will be performed yet the agency is asking for comments on details we have not seen yet. The County should be able to comment on any of the construction activity details which have not been provided in this work plan. Construction drawings are limited to 11X 17 figures with no detail for the implementation of this plan. For instance Figure 2 shows temporary staging areas with no design detail for stormwater control or post remedial closure. No detail regarding stockpiles is presented in the work plan. Is the contractor allowed to stockpile soil? Where are the details of the work to be performed?

Section 3.3 Excavation Controls

All pre-construction, construction and post-construction erosion and sedimentation (E&S) details, devices, and measures should be subject to approval by the Berks County Soil Conservation District. No intrusive construction activities should be permitted until all E&S plans are approved.

The work plan states "Where excavation is proposed, the removal depth will be 3-inches unless rock is encountered in which case excavation will be terminated at less than 3-inches." Excavation may require the removal of more than 3 inches of soil in an effort to properly remediate, construct the trail, or install drainage systems required for the trail. In addition, post-excavation verification samples should be performed either by laboratory analysis and/or XRF monitoring which should be used as the basis for the depth of excavation.

3.4 Restoration

This work plan should be a stand alone document and should not reference other remedial project specifications. Statements such as: "...the footpath will be restored using topsoil imported from an off-site source approved based upon chemical testing similar to the recently completed residential remediation." does not provide the detail necessary to review the work plan. We are still unsure of the analytical requirements to be used based upon the lack of detail.

The work plan should reference specific specifications by number throughout the text. Such as: Specification Section 02936 Part 1.4 provides additional detail regarding the sampling analyses required for backfill material from off-site soil sources; **and**, Section 02936 Part 2.1 provides detail of the topsoil screen size and topsoil requirements. It is very difficult for anyone reviewing this work plan to quickly reference the details of remediation to be undertaken.

Areas not seeded within the recommended seeding season should be monitored and re-seeded, if necessary, in the next growing season. Seed mixtures should be reviewed and approved by the Berks County Conservation District.

The footpath should be designed and constructed to allow for access by handicapped individuals and meet all ADA trail requirements. We suspect the rationale for the use of a non-woven polyester geotextile fabric under the entire distance of the footpath is for use as a separation layer to keep the stone from migrating into the soil and allow the water to infiltrate to areas beneath the fabric. If the footpath is widened and used by the City of Reading maintenance vehicles to service areas along the path the specification should be changed from a PennDOT Class 1 fabric to a PennDOT Class 2 woven geotextile (500X or similar with a grab tensile strength of at least 200 pounds).

Fencing erected directly on a property boundary does not allow maintenance except on the side of the fence owned by the park. Clearing shrub and foliage from the fence may not be possible since it would require an intrusion on another parties land.

The fence should be set back from the property boundary as per current township zoning regulations to allow for proper maintenance and repair, as needed. Exide should be responsible for remediating any areas outside, under, inside, or near the fence required to meet the remedial standard established for the project (650ppm) and prevent possible future exposure to individuals repairing or maintaining the fence.

E&S devices should be inspected daily (including weekends) and after every storm event and should remain in working order until Advanced GeoServices and the Berks County Conservation District authorize removal of the controls.

Specifications:

General Comment

The County did not find the level of detail required within the work plan or the specifications to fulfill the actual remedial work at the site. Additional detail should be provided for Berks County review in order to assess the remedial effort being undertaken and the methods employed to conduct the work. These are engineering tasks and should be in the work plan and should not be left to the contractor. The contractor should be allowed the ability to select various equipment available or employ varied techniques to accomplish the work the engineer has planned. We found almost every aspect of the work to be performed too vague to evaluate within the work plan.

The layout of the Specifications is such that it appears these are general specifications utilized by the engineer in various project settings and not designed for this specific project. Many of the details are located in numerous sections of the specifications making it difficult for us or a contractor to locate all details pertaining to a particular task or project requirement.

Section 01010 – Summary of Work

No Comments

Section 01351 - Health and Safety Requirements

Section 01351, Part 2.1 Designated Health and Safety Officer

The County suggests that the work plan state that the health and safety officer must be on-site during all construction and monitoring activities and must not hold any other position or other title for the project or other projects for the duration of the project. The health and safety officer should have all appropriate certifications (such as CIH, OSHA training, etc.) required to manage and supervise any and all health and safety issues related to the project. No work should be allowed to proceed until the HASP is approved by all parties even non-intrusive and preparatory work (such as installing safety fencing, E&S controls, etc.). Any alternate health and safety officer must hold certifications and training to meet the requirements of a CIH or similar qualifications.

Section 01351, Part 2.3 Air Monitoring

Mini-Ram and similar devices are limited to the area being screened and often do not reflect lead exposures to employees outside the devices practical monitoring range.

Low-volume or low-flow samplers should be used by employees for the first five (5) days of earth moving activities to verify a negative exposure assessment for the project. These samplers should be worn by various laborers and operators working for the entire 8-hour shift in the exposure areas. The samplers should be submitted to the lab for 24-hour TAT. After the first five (5) working days, low-flow samplers should be submitted on a one day per week basis randomly determined by the third party quality assurance engineer or project manager.

Section 01351, Part 2.4 Site Control

The park is owned by the City of Reading, the E&S systems are subject to Berks County Conservation District representative review and inspection, Muhlenberg Township officials may deem a site visit necessary if complaints are issued with respect to site remedial activities. Provision for pre-arranged visits to the site should be made by the project engineer and the site contractor(s) for individuals (even those without OSHA training) to visit the site and tour construction areas. Access by untrained individuals should be provided for in the HASP.

Section 01351, Part 2.4 Site Control, Letter D.

Decontamination facilities should have been designed and detailed by the engineer for the project and not left to the discretion of the contractor. The contractor should follow good engineering practices outlined by the engineer with proper materials, construction details and measures to prevent any contamination of adjacent areas. Control of wash water and PPE equipment to be utilized should have been described and designed by the engineer. This is an engineering scope and not a contractor responsibility.

Section 01358 - Environmental Protection Procedures

Section 01358, Part 3.2 E Washing Water

The engineer should have developed a plan for the control of decontamination wash water from the site. All contractors selected for this type of remedial work should hopefully know as stated that: "Water used for the decontamination shall be collected by the contractor and properly disposed of off-site." This does not provide the level of detail the engineer should have provided to the contractor to ensure proper management of the wash water and avoidance of overflow or spillage. Sampling protocols and disposal procedures should also have been outlined by the engineer for all wash water being disposed off site.

Section 01358, Part 3.5 Dust Control

Dust control during the project is paramount to prevent cross contamination to clean areas and to prevent adverse impacts to adjacent areas and residents. We think it is reasonable to require a zero visible emission standard for dust during construction activities. Third party observers should make USEPA Method 9 observations every hour to ensure 0% opacity. If any visible dust is observed, the work should be stopped until appropriate dust control measures are employed. We further suggest that a water truck be required to wash all road surfaces frequently and spray exposed soil surfaces. If dust becomes a nuisance, the Township of Muhlenberg and/or the City of Reading and/or the Berks County Conservation District in conjunction with the agency oversight personnel should have the ability to require stoppage of the work until the health and safety officer can ensure work can resume without a dust nuisance and potential for lead exposure to neighbors.

Section 01358, Part 3.8 Equipment Decontamination

No design of the decontamination pads described in this section has been provided in the work plan. Geosynthetic liner containment systems and water collection systems should be an engineering task not a contractor issue and should have been included in the designs submitted with the work plan. Refer to washing water comments under Section 01358 Section 3.2 E above for comments regarding the collection and management of wash water.

Section 02100 Site Preparation

Section 02100, Part 3.1 Familiarization

The work plan should be the method used to identify "Exide's expectations for the project" not a site walk with the contractor's superintendent. Everyone reading the work plan should be able to determine Exide's expectations, unfortunately the detail to evaluate the work is missing.

Section 02100, Part 3.5 Haul Roads

The engineer not the contractor should establish construction sequencing and traffic patterns for construction equipment. Basic engineering practice should be used to design the remedial activities including the sequence the contractor should follow.

Section 02100, Part 3.6 Temporary Construction Safety Fence

Signs should also be attached to the safety fence that indicate the area barricaded is a work zone and access is restricted. Signs should be bi-lingual.

Section 02110 - Site Clearing and Grubbing

Section 02110, Part 3.3 Handling of Cleared Material, Letter A

Although the County requested vegetation sampling at the time of our review of the Health Consultation performed by PADOH, no lead sampling of vegetation has occurred to date. Lead uptake in plants is expected in all trees, shrubs, and herbaceous plants at the park since there has been a long-term exposure to lead. The work plan only requires separation of cleared materials if they have come in contact with soils. What is the basis that these materials are "clean"? No testing or verification has been conducted. These materials should not be allowed for use on the site or for use off-site unless verification of lead content is verified.

Analytical methods for characterizing plant matter should be presented and approved by the agency(s) and the City of Reading Officials.

Section 02112 - Off Site Disposal

All disposal permits should list Exide as the generator. Copies of all permit applications and approvals should be provided to the City of Reading. Exide should be listed as the generator on all disposal documents.

The City of Reading should be provided copies of the fully executed manifests, bill of ladings, or other documents tracking the disposal of materials from the park. Copies of waste characterization analyses should also be provided to the City of Reading. Exide should be responsible for disposal of all materials related to this project.

Section 02115 - Erosion and Sediment Control Measures

Section 02115, Part 3.3, Letter C

The work plan states: "Entrances and haul roads shall have stone thickness as shown on the details." The only detail observed was presented on the Detail Sheet labeled *Stabilized Construction Entrance*. No description of post remedial restoration of the roadways was found. No vehicle decontamination procedures or description of decontamination facilities was presented in the drawings or within the work plan. It is likely that haul roads may become contaminated with residue from vehicle use and spillage from trucks and equipment. What steps are going to be taken to ensure the proper closure of haul roads?

Section 02209 – Soil Removal and Handling

Section 02209, Part 1.3, Letter A.

The requirement of the contractor to provide the means and methods should be to provide a general description of equipment and techniques used to implement the work plan and the specifications. No description of specific construction detail or sequencing has been provided by the engineer. Questions such as: "Is the contractor working from upslope to downslope areas?" are currently left wide open and should have been addressed in the work plan.

Section 02209, Part 2.1 Products, Letter A

The work plan states: "The contractor shall identify products..." Why is the contractor identifying the materials the engineer should have selected for the work effort?

This is an engineering task and any materials used should clearly be defined in the work plan. Specification Section 02936 outlines specific products for use in the project. Are there other products not listed that are to be used?

Section 02209, Part 3.1 General, Letter A

What steps are going to be employed to minimize impacts caused by inclement weather? What engineering steps can be employed to meet this specification? Where are the details?

Section 02209, Part 3.1 General, Letter B

What steps does the engineer expect the contractor to take ".to control at all times dust and dirt, both windblown and from machine operations? The Contractor shall monitor air quality in and around the work area." Where is the detail? How is this to be achieved? We cannot review a work plan that has no detail of proposed remedial activities.

Section 02209, Part 3.1 General, Letter C

While we understand that certain areas (such as the footpath) have not been fully designed "proposed work zones" for the other areas to be remediated should have been designed in the work plan. Storm water and run-off controls should be designed by the engineer and should be with in the work plan. It appears from the language in this section that this is a "plan as you go project". We strongly urge the detail required to perform the remedial work be engineered and properly presented in a detailed work plan and not be left to design in the field and modifications as the project proceeds. Berks County should be provided an opportunity to review and comment on the details of remediation once an appropriate work plan is prepared.

Section 02209, Part 3.4 Cross-Contamination, Letter B

"The Contractor is responsible for all costs of cleaning up any/all cross-contaminated area at no additional cost to Exide" If deposition of lead has continued to occur or has not been fully evaluated in areas considered clean from previous historic sampling the contractor would be burdened for remediating rather than Exide. Current evaluation of clean areas should be performed to verify the previously reported analytical results have not changed prior to the initiation of this work. This would also allow future comparison to verify whether cross-contamination resulting from remedial activities has occurred.

Cross-contamination of lead is unlikely to be determined from visual observations. If dusty conditions prevail throughout the project the only way to assess cross-contamination is through analytical or XRF sampling. We urge that appropriate sampling be undertaken to ensure the clean-up standards are met for the park.

Section 02209, Part 3.6 Post Excavation Sampling, Letter A

The County is alarmed that there is no post-excavation sampling proposed for this project. Post remedial sampling conducted by a third party would assure compliance with the clean-up standards established for the project. An XRF device could be used to screen a set number of locations per square footage of remedial work performed to assess the cleanup standard has been achieved and that no tracking or cross contamination has occurred. The minimal time to conduct such screening would provide all parties with an assurance that the clean-up criteria is attained.

Section 02209, Part 3.8 Water Management During Construction, Letter A

Transfer of water from one area to another without testing during remedial activities is a method of cross-contamination. Such practices should not be permitted unless analytical testing is performed.

These tests should verify that the levels of lead-in-water are below a level that would result in an exceedance of the lead-in-soil criteria for the site.

Section 02209, Part 3.8 Water Management During Construction, Letter B

The work plan states; "Plain wash water shall be allowed to infiltrate at the decontamination area." All decontamination wash water should be required to be managed as contaminated water. Infiltration of potentially high levels of lead may wash contaminants to depths deeper than the planned excavation depths proposed in the work plan. This specification contradicts Section 01358, Part 3.2 E Washing Water which states: "Water used for the decontamination shall be collected by the contractor and properly disposed of off-site."

Section 02936 Site Restoration, Part 2.5 and 3.8 Sediment Logs

Sediment log use such as Curlex Sediment Logs® are often problematic on sloped areas. Occasionally heavy rain run-off builds up behind the sediment log and the wooden stakes break and the entire systems rips apart and then slides down the slope. Repairs to such systems are then very difficult to make. Placing a double row of silt fence is often much more effective on sloped areas. If the sediment logs are used, care should be taken to ensure the manufacturer's recommendation on spatial distancing for stakes on sloped areas is followed for the project.

Section 02936 Site Restoration, Part 3.9 Footpath Construction

The footpath should be constructed to ADA standards including but not limited to:

- Clear tread width should be a minimum of 36";
- Tread obstacles should not exceed a maximum height of 2" (up to 3" high where running and cross slopes are 5% or less). Obstacles such as tree roots or small tree stumps should be no more than 2 inches tall. An edge is not mandatory but if added, should be no shorter than 3 inches tall.
- The Cross Slope shall not exceed 1:20 or 5% maximum;

- No more than 30% of the total trail length may exceed a running slope of 1:12 or 8.33%;
- Running slope (trail grade or incline) must meet one or more of the following:
  a. 1:20 or 5% or less for any distance;
  b. 1:12 or up to 8.33% maximum for a maximum distance of 200'. Resting intervals should be no more than 200' apart;
  c. 1:10 or up to10% maximum for a maximum distance of 30'. Resting intervals should be no more than 30' apart; and,
  d. 1:8 or up to 12.5% for a maximum distance of 10'. Resting intervals should be a maximum of 10' apart.
- Passing Space: provided at least every 1000' where trail width is less than 60"
- Signs: shall be provided indicating the length of the accessible trail segment. Signs should be posted at the trailhead. At a minimum, the information on these signs should include the typical and maximum trail grade, the typical and maximum cross-slope, the minimum clear tread width, surface type and firmness, and any obstacles the user may encounter. In addition, the sign should state that the information provided reflects the condition of the trail when the trail was constructed and the date of construction. Adequate signage should be erected using handicap symbols and showing accessible trailheads, access points and mileage of the accessible trail.

Section 02936 Site Restoration, Part 3.13 Repair and Maintenance

The footpath should be added to the repair and maintenance items since some repairs to the footpath may be required up to one (1) year after the completion of the remedial work effort. In fact, we feel the maintenance of the footpath should be extended beyond a one-(1) year timeframe.

Conclusion:

We appreciate your consideration of our comments and again reiterate that we are concerned that the detail necessary to perform this work is lacking in this work plan and we would hope the agency requires greater detail prior to authorizing the remedial work to proceed.

Sincerely,

Berks County Commissioners

Mark C. Scott, Esq. Commissioner Chair

Kevin S. Barnhardt, Commissioner

Christian Y. Leinbach, Commissioner

Attachment 5
Berks County Head Start
Child* Blood Lead Result Report

Reading/Muhlenberg Head Start-AM
2615 Warren Road
Reading, PA 19604

Blinded Child Record Number	Date of Birth	Blood Lead Result (µg/dL)	Test Date
1	1/28/05	6	4/27/09
2	12/4/05	2	6/18/07
3	9/1/04	2	11/10/08
4	12/29/05	3	1/4/08
5	6/16/05	6	6/20/06
6	6/16/05	1	7/19/07
7	2/5/05	2	2/13/07
8	7/23/05	7	1/2/08
9	3/4/05	3	5/12/09
10	12/10/04	4	11/15/06
11	12/22/04	1	9/29/05
12	12/31/04	6	3/4/08
13	8/21/06	N/A	--
14	3/18/05	4	10/28/08
15	11/4/04	5	11/10/08
16	11/17/04	3	12/20/06

*Blinded report without child identifier information.
**Information provided by center.
***Most recent blood lead level reported.
****N/A indicates blood lead result "Not Available" due to lack of parental consent for testing.

Attachment 5 (Continued)

Berks County Head Start

Child* Blood Lead Result Report

Reading/Muhlenberg Head Start-PM

2615 Warren Road
Reading, PA 19604

Blinded Child Record Number	Date of Birth	Blood Lead Result (µg/dL)	Test Date
1	12/15/04	2	11/10/08
2	11/29/05	3	2/19/08
3	12/10/04	2	11/12/08
4	12/2/05	<3	12/11/08
5	1/1/05	7	2/9/07
6	4/30/05	3	11/10/08
7	5/24/04	4	4/23/09
8	9/10/04	0	7/12/05
9	12/6/04	0	4/28/09
10	5/16/06	5	5/21/09
11	3/9/05	3	3/31/08
12	8/22/05	4	6/12/06
13	1/11/05	1	4/27/09
14	6/13/05	5	4/27/09
15	5/11/06	<3	6/1/08
16	1/26/05	N/A	--
17	6/7/05	5	3/31/09

*Blinded report without child identifier information.
**Information provided by center.
***Most recent blood lead level reported.
****N/A indicates blood lead result "Not Available" due to lack of parental consent for testing.

Attachment 5 - Continued
Berks County Head Start
Child* Blood Lead Result Report

River's Chase Head Start
1111 Commons Blvd.
Reading, PA 196012

Blinded Child Record Number	Date of Birth	Blood Lead Result (µg/dL)	Test Date
1	1/6/05	<1	1/26/06
2	10/31/04	N/A	--
3	7/13/06	3	1/31/08
4	1/19/05	<3	1/15/09
5	6/21/06	7	7/16/08
6	9/27/04	3	5/12/09
7	4/21/05	4	12/10/09
8	11/2/04	<2	10/30/09
9	10/31/05	2	10/30/09
10	9/18/05	N/A	--
11	9/13/04	3	3/8/07
12	9/14/04	<2	11/10/08
13	7/21/06	3	3/6/09
14	4/28/06	9	9/11/07
15	12/11/04	1	12/13/05
16	12/6/04	5	4/27/09
17	8/8/05	N/A	--
18	6/3/05	3	11/10/08

*Blinded report without child identifier information.
**Information provided by center.
***Most recent blood lead level reported.
****N/A indicates blood lead result "Not Available" due to lack of parental consent for testing.

Attachment 5 (Continued)
Berks County Head Start
Child* Blood Lead Result Report

Antietam Head Start
210 N. 25th St.
Reading, PA 19606

Blinded Child Record Number	Date of Birth	Blood Lead Result (µg/dL)	Test Date
1	12/2/04	4	10/28/08
2	8/2/06	4	8/5/08
3	3/28/05	N/A	--
4	9/5/04	2	4/16/10
5	2/1/05	2	4/17/09
6	10/9/04	1	4/23/07
7	7/22/05	4	7/1/06
8	4/28/06	4	10/4/07
9	7/13/05	<3	10/4/07
10	3/21/06	<2	4/16/10
11	12/7/04	7	10/20/09
12	11/16/04	<2	10/28/08
13	2/1/05	<2	4/17/09
14	1/31/05	5	3/19/07
15	10/24/05	2	10/1/07
16	6/18/05	<2	4/16/10
17	8/16/05	7	5/18/07
18	12/20/05	N/A	--

*Blinded report without child identifier information.
**Information provided by center.
***Most recent blood lead level reported.
****N/A indicates blood lead result "Not Available" due to lack of parental consent for testing

SAVE OUR PARK!!!

Dear Editor,

Across from where I live in Muhlenberg Township is a place called Bernhart's Park. Here is the problem; it was closed down years ago because it has a large amount of bad soil, caused by Exide, a battery company. The City of Reading owns Bernhart's and does not maintain it well, so as years go by it becomes more and more run down. My thought is Bernhart's Park should be reopened and fixed up. Exide has to fix the soil, and Reading should have a weekly maintenance schedule of cutting grass, trimming hedges, **cleaning up trash**, making sure the water fountains work, and more.

Bernhart's is in bad condition because it is not maintained well enough by Reading, and Exide does not want to fix anything. Trees are down, benches are horrifically broken, grass is not cut at all, and dilapidated old grills are left half standing. There are overgrown bushes, trees, and plants that block the old trails like boulders. What I hate most is stickers have obstructed the trails and walkways making them impassable. Most of all, there is trash everywhere.

The park should be opened up to show people its full potential and beauty. If people help rejuvenate the park they could get more exercise. Second, people might become more perceptive to the melodious sounds of wildlife and become more spirited about taking care of our environment. If some of the Exide people had a conscience, people could again visit the park and enjoy themselves and build social skills. Fourth, if this ordeal is corrected maybe visitors will come from far to eat and play helping to build a good reputation for Reading. That is why I think the park should be opened up to show its full potential.

Sincerely,

Hannah Shelly 5th grader

Muhlenberg Township

CC: Mayor Tom McMahon

CC: Reading City Council